Abstract for Supplementing Hearing Aids with Computerized Auditory Training. ID: 1940,
VA #11-4306,

Objectives: Hearing aids provide the primary method of treatment for adults with hearing loss. Research data clearly demonstrate many beneficial treatment effects from hearing aid intervention, however, wide individual variation in treatment outcome is also documented. To improve the outcomes of hearing aid intervention, other components of auditory rehabilitation can be considered. With the advent of easy access to home computers one type of intervention that is receiving interest is home-based computerized adaptive auditory training. Although recent work has shown encouraging data, it is not clear that auditory training will improve hearing aid outcomes over that of standard-of-care hearing aid intervention, particularly in the VA population. In this study we will assess the relative efficacy of supplementing standard-of-care hearing aid intervention provided to adult veterans with hearing loss, with auditory training administered via a commercially available computer-administered auditory training program; and, with a "placebo" auditory training paradigm, consisting of "directed listening" activities for specified periods of time.

Plan: The study will take place at three test sites. The primary site is the Bay Pines VA Healthcare System, in Bay Pines Fl, with the National Center for Rehabilitative Auditory Research at the Portland VAMC, Portland OR and Mountain Home VAMC in TN as participating sites. Equal numbers of participants will be tested and recruited at each site. Subjects will be hearing aid users with at least 4-weeks experience with use. The study is a multi-site, randomized controlled, parallel group clinical trial to assess the effectiveness of an at home-based auditory training as a supplement to standard-of-care hearing-aid intervention in veterans treated for hearing loss, with or without previous hearing-aid experience. The participants will be assigned randomly to one of four groups, with hearing-aid use stratified within the groups: (1) Auditory Training twenty sessions (AT20), in which the participants will complete the LACE auditory training program over twenty sessions; (2) Auditory Training ten sessions (AT10), in which the participants will complete the LACE auditory training program over ten sessions; (3) Directed Listening (DL) in which the participants will listen to books on tape played from a computer for twenty sessions and (4) Control (CTL) in which participants receive standard-of-care hearing-aid intervention.

Methods: The participants in each group will attend four test sessions. During Visit 1 the informed consent process will be completed, baseline assessments will be made to ensure that the participants meet the study inclusion criteria (page 1), testing of predictor variables (page 7-8) will be completed, and all hearing aids will be assessed for correct functionality (pages 2-3). The participants then will be assigned randomly to a test group. Visit 2 will occur within six weeks of Visit 1. During Visit 2, baseline performance on the outcome measures will be assessed (page 4-7), as will performance on the predictor variables. Following testing, the participants in Groups 1, 2 and 3 will receive training in the use of the LACE program or the DL programs. Visit 3 will occur at the end of the 10 or 20 session training periods. Visit 4 will occur six months after Visit 3. During Visits 3 and 4 all participants will be retested on the outcome measures to assess short-term and long-term intervention outcomes respectively. At Visits 2, 3 and 4, the stability of hearing aid function will be assessed through electroacoustic measures.

Findings to Date: No subjects have been enrolled. Funding was received in July 2008. Since that time the DL stimuli have been created, the laboratory has been prepared, the study protocol ahs been finalized and the xx manual has been created. Enrollment will begin in January 2009.